

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A carrier for at least one specimen chamber for cryoconservation of biological specimens, comprising
a mounting frame for positioning the specimen chamber, wherein the mounting frame has a first frame part and a second frame part which can be joined together detachably using connecting elements and which come in contact on side faces of the frame parts in the assembled state,
wherein the specimen chamber can be secured between the side faces of the mounting frame, so that the specimen chamber is immovable relative to the mounting frame.
2. (Previously Presented) The carrier according to claim 1, wherein one of the side faces is flat and the other side face has a profiling so that receptacle elements are formed between the side faces, and the specimen chamber can be secured in these receptacle elements when the mounting frame is assembled.
3. (Previously Presented) The carrier according to claim 1, wherein both side faces have profiling so that receptacle elements are formed between the side faces and the specimen chamber can be secured in the receptacle elements when the mounting frame is in the assembled state.
4. (Previously Presented) The carrier according to claim 1, wherein the receptacle elements have an oval, triangular, rectangular or slotted cross section.
5. (Previously Presented) The carrier according to claim 1, wherein the connecting elements comprise fitting webs, grooves, pins, bushings, or combination thereof, on the side faces.
6. (Previously Presented) The carrier according to claim 5, wherein the webs, grooves, pins, bushings, or combination thereof, have latching profiles.

7. (Previously Presented) The carrier according to claim 1, wherein one of the frame parts has tension pins on its outside, each tension pin being aligned with respect to the receptacle elements so that stretching of the specimen chamber on the frame part is made possible.

8. (Previously Presented) The carrier according to 1, wherein the frame parts are pivotably joined together on one side.

9. (Previously Presented) The carrier according to claim 1, wherein each of the frame parts have outer frame elements which form a rectangular shape from the mounting frame.

10. (Previously Presented) The carrier according to claim 9, wherein the frame parts are equipped with inner frame elements which also form receptacle elements in the assembled state so that the specimen chamber can be secured in the receptacle elements.

11. (Previously Presented) The carrier according to claim 1, wherein each of the frame parts consist of frame elements which extend outward radially in a star shape.

12. (Previously Presented) The carrier according to claim 1, which is connected to a data memory device having at least one data memory.

13. (Previously Presented) A cryostorage device, comprising a carrier according to claim 1 and at least one specimen chamber of a flexible, elastically deformable material.

14. (Previously Presented) The cryostorage device according to claim 13, wherein the at least one specimen chamber is in the form of a hollow cylinder, a hollow cone, a pipe, a tube, a channel or a hollow needle.

15. (Previously Presented) A method for storage of at least one suspension specimen in a low-temperature state, comprising the steps of:

accommodating the at least one suspension specimen in at least one specimen

chamber made of a flexible elastically deformable material,
mounting the specimen chamber in a carrier according to claim 1, wherein the specimen chamber is secured between the frame parts, and
converting the suspension specimen to a low-temperature state by positioning the carrier with the specimen chamber in a cryomedium.

16. (Previously Presented) The method according to claim 15, wherein the receptacle of the at least one suspension specimen into which at least one specimen chamber is inserted by immersing the at least one specimen chamber with one inlet end into a specimen reservoir and transferring the suspension specimen under the influence of a vacuum applied to the corresponding outlet end or under the influence of capillary forces.

17. (Previously Presented) The method according to one of claims 15, wherein at least one partial specimen is detached from the at least one specimen chamber in the low-temperature state by mechanical separation.

18. (Previously Presented) The method according to claim 17, wherein the mechanical separation comprises cutting off chamber sections of the specimen chamber adjacent to the frame elements of the carrier.